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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/023,344 | 12/17/2001 | Hirokazu Miwa | 0941.66061 | 7994 |
| 7590 10/28/2004 | | | EXAMINER | |
| Patrick G. Burns, Esq. GREER, BURNS & CRAIN, LTD. Suite 2500 300 South Wacker Dr. Chicago, IL 60606 | | | LAO, LUN YI | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2673 | |

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/023,344 | Applicant(s) MIWA ET AL. | |
| | Examiner Lao Y Lun | Art Unit 2673 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 7-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Bennett et al(5,034,736).

As to claims 1 and 3, Bennett et al teach a liquid crystal display comprising: a display part displaying an image in accordance with image data supplied through data signal lines(C1-C9); and a driving part driving said data signal lines(28, 32) driving each data signal line(C1-C9) by using a plurality of driving devices(D3, D4, 28, 32) together for simultaneously so as to increase the driving capability(see figures 1-2, 6; column 2, lines 16-27; column 3, lines 35-39; column 4, lines 13-35; column 5, lines 16-68; column 6, lines 1-3 and column 10, lines 6-33).

As to claim 3, Bennett et al teach the number of the driving devices used for driving each data signal line is controlled in accordance with a particular type of display part(large size and fast response LCD display)(see figures 2, 6 and column 2, lines 7-27).

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3. Claims 1, 3 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Imamura(6,091,392).

As to claims 1, 3 and 5-6, Imamura teaches a liquid crystal display having a plurality of data signal lines(column lines) and a driving part(5) driving data signal lines(column lines) by supplying a plurality of sets of same image display data to each data line simultaneously so as to increase the driving capability(see figures 1, 3; column 2, lines 26-29 and lines 59-68; and column 3, lines 1-8).

As to claim 3, Imamura teaches the number of the driving devices used for driving each data signal line is controlled in accordance with a particular type of display part(resolution640X400 or color LCD display with narrow electrode pitches)(see figure 1; column 1, lines 34-36 and column 4, lines 59-61).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al or Imamura in view of Masuda et al(5,801,672).

Bennett et al or Imamura fail to disclose a wiring part provided on a substrate on the display part is formed.

Masuda et al teach an LCD display comprising a wiring part(301a, 301b) integrated with a display part(see figures 2, 9 and column 1, lines 33-39). It would have been obvious to have modified Bennett et al or Imamura with the teaching of Masuda et al, so as to eliminate cumbersome interconnection between the display panel and the drive circuit section.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al or Imamura in view of Maekawa et al(5,686,936).

Bennett et al or Imamura fail to disclose the plurality of driving devices disposed on the same side of the display signal line.

Maekawa et al teach an LCD display for disposing a plurality of driving devices(2, 5) on the same side of the display signal line(column line)(see figure 1 and column 4, lines 46-50). It would have been obvious to have modified Bennett et al or Imamura with the teaching of Maekawa et al, since Maekawa et al have disclosed the driving devices could be mounted on opposite side or same side and the driving devices mounted on the same side of data lines would be more easy for assembly, repair and replace.

Response to Arguments

7. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kinoshita et al(6,246,385) teach signal driving circuits(15-16) simultaneously driving signals lines(Y1to YM)(see figure 49 and column 3, lines 45-50).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi, Lao whose telephone number is (703) 305-4873.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

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October 27, 2004

Lun Yi Lao

Lun-yi Lao

Primary Examiner